

Systems Engineering / Project Management ES-SES4000

Tentative schedule (subject to Change)

Prof. Aurilla Aurélie Arntzen

aurillaa@usn.no

Kongsberg, Norway

1. Overview



Systems engineering is an interdisciplinary approach enabling the design, conception, implementation and evaluation of successful systems. This lecture explores techniques and methods in order to define customer need, requirement documentation, technical functionality specification, system design and validation. This course encompasses several parts. The first section will present the fundamental of system engineering. This 5 days intensive course present in an integrated manner the keys concepts of systems engineering. The second part introduces the techniques and approaches in managing complex

systems. Students will get not only theoretical knowledge but through concretes projects they will be able to apply the learned concepts. Seminars given by highly experienced speakers will expand their horizon in system engineering by acquiring additional knowledge such as system integration, knowledge capitalization, communication, Big data, Artificial Intelligence, Cyber security and so forth. At the end of the lecture, the students should present results of group projects done during the class and in May.

2. ATTENDANCE

Classes are mandatory- Students are expected to arrive in time during the classes. We have to be professional and therefore no delays is tolerated. Many Thanks for accepting the rules.

3. ASSESSMENT METHODS

Class Team Project – After the weekly course

Individual Homework – deadline December 2018 (delivering Wiseflow)

Home Team project encompassing documentation and final presentation- May 2019 (best project will be awarded)

University grade distribution applies, see [here](#).

Assessment type/scale → A-F

4. LITERATURE/READINGS

Pre-reading material shall be distributed before the start of the class. The students are invited to read them before attending the course. In the class we will discuss the content of papers.

Schedule

Date	Lecture	Topic	Room	Pre-Reading
21.08.18	Lecture 1 09h15 12h00	Introduction to Systems Engineering course philosophy- potential project	2229	None
27.08.18	Lecture 2 09h15 16h00	Systems Engineering Introduction to Systems, SE and requirement	2229	Read paper 1 - paper 2
28.08.18	Lecture 3 09h00 16h00	Systems Engineering	2229	Lectures- pre-reading Paper 2 – paper 3 papers discussion Class project work
29.08.18	Lecture 4 09h00 16h00	Systems Engineering	2229	Lectures- pre-reading papers discussion (paper 4—5) Class project work
30.08.18	Lecture 5 09h15 16h00	Systems Engineering	2229	Presentation of the class project
24.09.18 28.09.18	Lecture 09h15- 16h00	Complex Project Management Big data seminar Home group project specification	2229	5 days (program on the way)
27.09.18	Seminar 2 hours	Mathematics and AI Swarm Intelligence	2229	Paper to read (check Canvas- section seminars)
04.10.18		Seminars and project plan	2229	
From 04.10.18 Every Thursday Til --29 November	Seminar or work on the project	Project	2229	